Title: Comparison Of Model Demonstration And Video-Based Education Methods On Oral Hygiene Practices And Caries Incidence In 3–5-Year-Old Children: A Randomized Controlled Trial

Statistical Analysis

All statistical analyses were performed using IBM SPSS Statistics version 25.0 software.

For the variables of education level, income status, and caries status, univariate Chi-square tests were initially conducted. Pearson's Chi-square test was used when the assumptions were met; otherwise, the Likelihood Ratio Chi-square test was preferred. When a statistically significant association was found in at least one item in the univariate analyses, multivariate binary and multinomial logistic regression models were constructed.

For factors that showed statistical significance in either the univariate analyses or the regression models, pairwise comparisons between groups were performed using the Bonferroni-corrected Z-test.

Comparisons of questionnaire responses before and after the education within each group were carried out separately. For items with three or more categories, the McNemar-Bowker test was used, while the McNemar test was applied for dichotomous items. When statistical significance was detected in items with three or more categories, post-hoc pairwise comparisons were performed using the Bonferroni-corrected McNemar test.

The changes in responses from pre- to post-education between the control and intervention groups were compared using Chi-square tests. Pearson's Chi-square test and Fisher's Exact test were used when the assumptions were satisfied; otherwise, the Likelihood Ratio Chi-square test was preferred. When a statistically significant difference was observed, pairwise comparisons between the education and control groups were performed using the Bonferroni-corrected Z-test.

The level of statistical significance was set at $p < 0.05$ for all analyses.